

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings of claims in the application.

LISTING OF CLAIMS:

1. (Previously Presented) An integrated and digital production and finishing system for producing and finishing work pieces of a job, comprising:

a) a production device for producing the work pieces of the job;
b) a finishing device for finishing the output of the production device, such finishing device being controlled separately from the production device and having at least one constraint;

c) a production monitor controller that receives input of at least one constraint from the finishing device and an output comprising job coordination and optimization information; database representation of the structure of job segments; PDL file for job tracking sheet; PDL for a fetch sheet; integrity descriptors; virtual job tickets for said production and finishing devices; and a prompt to call one or more human operators, based at least in part upon constraints of the finishing device, wherein said production monitor controller presents a user with optimization recommendations; and

d) a finishing module coordinator that, after receiving the output from the production monitor controller, identifies each device necessary for completion of the job; determines if each needed device is available; and controls, directs and tracks the operation of the finishing device, wherein said finishing device is programmed to automatically process an assembly and finishing operation based upon instructions created prior to producing said work pieces.

2. (Original) The production and finishing system of claim 1, wherein the production device comprises a printing device and wherein the job is a print job.

3. (Original) The production and finishing system of claim 1, wherein the finishing device performs packaging operations.

4. (Original) The production and finishing system of claim 1 wherein the production monitor controller outputs job coordination information comprising identity of job segments determined at least in part upon constraints of the finishing device.

5. (Original) The production and finishing system of claim 4, wherein the production monitor controller outputs at least a portion of finishing job segment information prior to production of at least a portion of the job by the production device.

6. (Previously presented) The production and finishing system of claim 4, wherein the production monitor controller output comprises a job segment identifier uniquely associated with each identified job segment.

7. (Original) The production and finishing system of claim 1, further comprising a virtual finishing job ticket database through which the finishing module coordinator receives at least some job coordination information from the production monitor controller.

8. (Original) The production and finishing system of claim 7, wherein the production monitor controller outputs job coordination information comprising:

a) identity of at least one job segment determined at least in part upon constraints of the finishing device and

b) a job segment identifier uniquely associated with job coordination information pertaining to the job segment and wherein the virtual finishing job ticket database stores a copy of the job segment identifier.

9. (Original) The production and finishing system of claim 8, further comprising a job segment identifier code that is physically associated with a job segment wherein such job segment identifier code forms a vector to job coordination information stored in the virtual finishing job ticket database, and pertaining to the job segment to which the job segment identifier code is physically associated.

10. (Original) The production and finishing system of claim 9, wherein the job segment identifier code comprises recognizable text on a sheet located on the job segment.

11. (Original) The production and finishing system of claim 9, further comprising a job segment identifier sheet that contains the job segment identifier code.

12. (Original) The production and finishing system of claim 11, wherein the job segment identifier sheet contains job coordination information pertaining to the job segment that was outputted from the production manager controller and stored in the virtual finishing job ticket database.

13. (Original) The production and finishing system of claim 11, further comprising a virtual finishing job ticket reader for reading information from the job segment identifier sheet.

14. (Original) The production and finishing system of claim 7, wherein the production monitor controller outputs a virtual finishing job ticket, a copy of which is stored in the virtual finishing job ticket database.

15. (Original) The production and finishing system of claim 1, wherein the production manager controller outputs job coordination information comprising:

- a) identification of different job segments for differing operations of the job,
- b) instructions of production of each production job segment; and
- c) instructions for finishing each finishing job segment.

16. (Original) The production and finishing system of claim 14, wherein the production manager controller outputs further comprise:

- a) integrity descriptors for use by the finishing module coordinator;
- b) at least one virtual print job ticket; and
- c) at least one virtual finishing job ticket.

17. (Original) The production and finishing system of claim 1, further comprising a plurality of finishing devices and a plurality of production devices wherein a plurality of finishing devices are controlled separately from each of the production devices.

18. (Original) The production and finishing system of claim 1, wherein the finishing module coordinator directs operation of at least one finishing device by providing human readable instructions to human operators.

19. (Original) The production and finishing system of claim 1, wherein at least some of the functions of the finishing module coordinator are performed within the same apparatus as the production manager controller device.

20-34. (Cancelled)